

COMPOSITE MATERIAL COLLATION MACHINE AND ASSOCIATED
METHOD FOR HIGH RATE COLLATION OF COMPOSITE MATERIALS

ABSTRACT OF THE DISCLOSURE

5 A composite material collation machine and associated method for fiber tape
placement and consolidation at a relatively high rate are provided. The composite
material collation machine includes a laser diode array for heating at least one fiber
tape, a compaction device for pressing the fiber tape against a workpiece, an
inspection system for monitoring the fiber tape, and a controller. The inspection
10 system produces an output representative of at least one characteristic of the fiber
tape, and the controller is capable of receiving the output and, based on the output,
automatically altering at least one system parameter defining an operational
characteristic of the composite material collation machine.

15

CLT01/4497434v2

209020" SE 439001